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(57) Abstract:

PURPOSE: To improve the quality of a workpiece by measuring the surface temperature of the workpiece being subjected to peening, operating the residual stress value of the workpiece from the measured surface temperature and carrying out shot peening.

CONSTITUTION: When shot grains S which are discharged out of a shot grain discharging part 2 at a high speed collide against a workpiece X on a rotary jig 1, surface hardening takes place due to compression deformation while temperature rises. This surface temperature is measured by an infrared temperature measuring device 3 and based on the measured value, the value of a residual stress which is generated on the surface of the workpiece X is calculated by an operating part 4 and indicated by a display part 5, while a control part 8 controls the drive of the shot grain discharging part 2 based on the operated value. Thereby, a desired residual stress can be given easily and accurately improving the quality of the workpiece.

